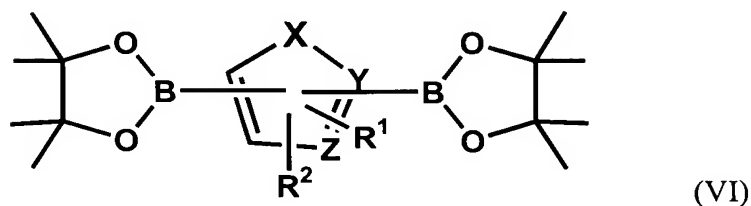
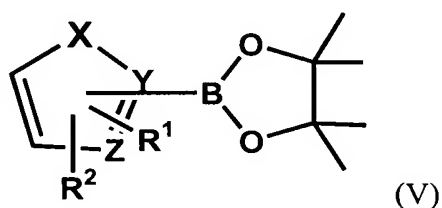


Claim Amendments

This listing of claims will replace all prior versions, and listings, of claims in the application.

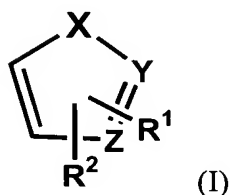
Listing of Claims

Claim 1. (Currently Amended) A process of producing a heteroaryl boron compound represented by formula (V) or (VI):

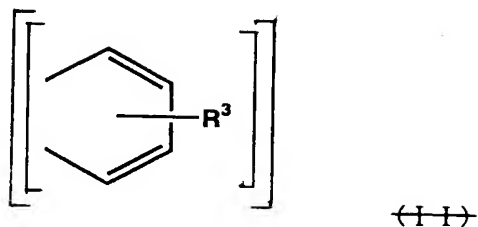


wherein, X, Y, Z, R¹ and R² are the same as defined below, comprising:

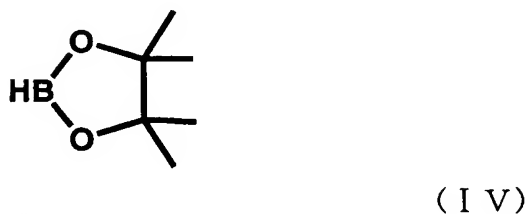
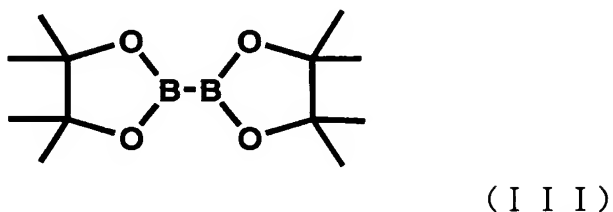
reacting an aromatic heterocyclic compound represented with the following formula (I):



wherein X represents an oxygen atom or a sulfur atom, each of Y and Z represents -CH=, R¹ and R² may be the same or different and each represents a hydrogen atom, a linear or branched C₁₋₈ alkyl group, a linear or branched C₁₋₈ alkoxy group, a nitro group, a cyano group, a halogenated C₁₋₈ alkyl group, a halogen atom, a carbamoyl group, a C₁₋₈ acyl group, a C₁₋₈ alkoxycarbonyl group, an amino group which may have a substituent,



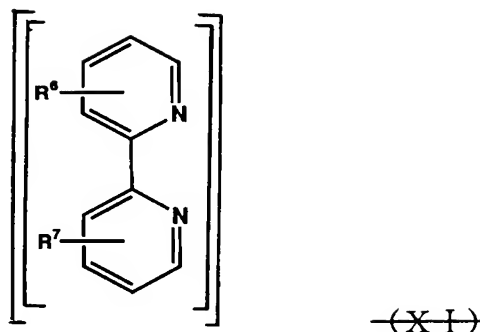
with a boron compound represented with the following formula (III) or (IV):



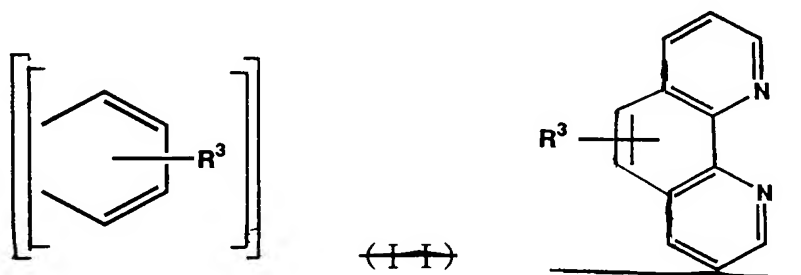
in the presence of a univalent iridium complex catalyst of formula (X):



wherein A represents a chlorine atom, a linear or branched C₁₋₈ alkoxy group, a hydroxyl group or a phenyloxy group which optionally has a substituent, B represents 1,5-cyclooctadiene or 1-cyclooctene, and n represents 1 or 2, or a univalent iridium complex catalyst in which the complexing ligand has formula ~~(XI)~~:



wherein R^6 and R^7 , located at positions 3 and 3' of the bipyridine base, taken together form a divalent radical of the following formula:



wherein R^3 represents a hydrogen atom, a linear or branched C_{1-8} alkyl group, a linear or branched C_{1-8} alkoxy group, a nitro group, a cyano group, a halogenated C_{1-8} alkyl group, a halogen atom, a carbamoyl group, a C_{1-8} acyl group, a C_{1-8} alkoxycarbonyl group, or an amino group which may or may not have a substituent.

Claims 2 and 3. (Canceled)

Claim 4. (Previously Presented) The process according to claim 1, wherein A of the iridium-containing catalyst is a methoxy group, B is 1,5-cyclooctadiene and n is 1.

Claim 5. (Previously Presented) The process according to claim 1, wherein A of the iridium-containing catalyst is a chlorine atom, B is 1,5-cyclooctadiene and n is 1.

Claim 6. (Previously Presented) The process according to claim 1, wherein A of the iridium-containing catalyst is a chlorine atom, B is 1-cyclooctene and n is 2.

Claim 7. (Canceled)

Claim 8. (Previously Presented) The process according to claim 1, wherein the ligand is 2,2'-bipyridine.

Claim 9. (Previously Presented) The process according to claim 1, wherein the ligand is 4,4'-di-tert-butyl-2,2'-bipyridine.

Claim 10. (Previously Presented) The process according to claim 1, wherein the reaction is carried out in the presence of solvent.

Claim 11. (Previously Presented) The process according to claim 10, wherein the solvent is a hydrocarbon.

Claim 12. (Canceled)